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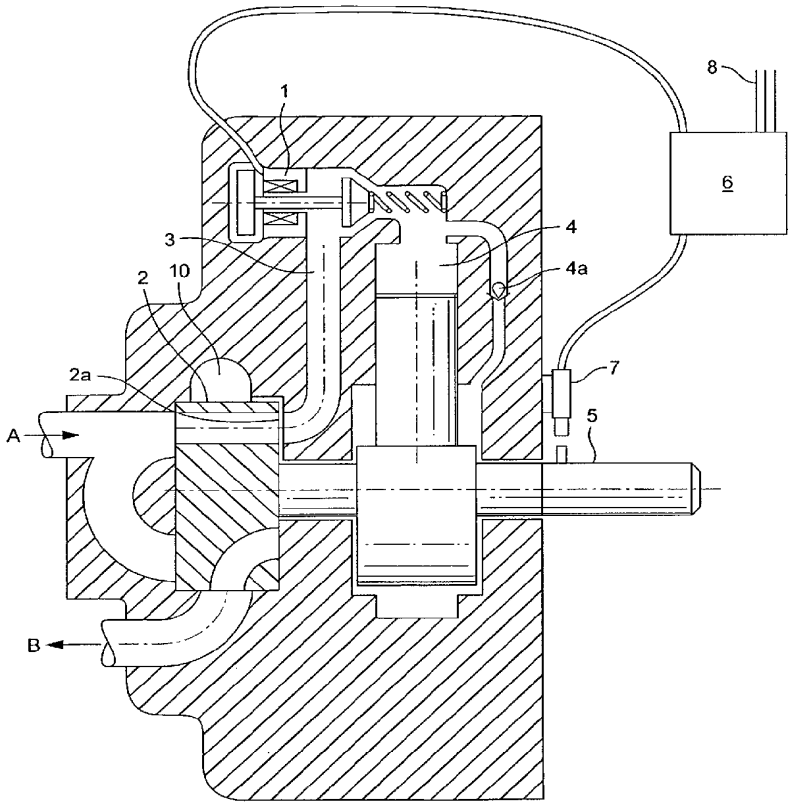
(54) Title: FLUID-WORKING MACHINE WITH DISPLACEMENT CONTROL



(57) Abstract: A fluid-working machine has working chambers (4), each of which is connected to a fluid commutating means (2) which alternately connects the working chamber to either of two fluid manifolds (A, B). An electronically controlled valve (1) is inserted into the flow path between each chamber (4) and the commutating means. This valve is commanded by a controller (6) receiving an input signal of the phase angle of the shaft (5) of the machine or at least one electronic pulse per revolution which informs the controller that the shaft is passing a known phase angle. The valve (1) allows overriding of fixed mechanical commutation by closing the valve cyclically, synchronised with the angular position of the shaft (5). Thus the controller (6) is able to vary the time-averaged fluid flow into or out of the machine by varying the proportion of chambers (4) which are isolated from or connected to the mechanical commutating means (2), to control the torque, speed, and/or fluid flow into and out of the machine.

WO 2005/095800 A1

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